REMARKS

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

The Restriction Requirement indicates that claims 1-78 are pending (e.g., at Disposition of Claims in the Office Action Summary). Applicants respectfully point out that claims 8, 17, 18, 20, 21, 23, 24, 26, and 29-78 were canceled upon filing of the instant application, as indicated in the Transmittal mailed with the application on March 30, 2001 (see, e.g., item 3 on page 1 of the Transmittal).

In response to the Restriction Requirement, Applicants hereby provisionally elect the claims of Group XXVI (including claims 3-7, 9, and 11-12), drawn to polynucleotides encoding SEQ ID NO:9, polynucleotides comprising SEQ ID NO:26, host cells, vectors, and a method of making polypeptides encoded by the polynucleotides, with traverse. In response to the requirement for election of a sequence, Applicants provisionally elect the species of SEQ ID NO:9 (which is encoded by a polynucleotide having the sequence of SEQ ID NO:26), also with traverse. Applicants traverse both requirements on the following grounds:

Claims directed to methods of using the claimed polynucleotides for detecting polynucleotides by hybridization (i.e., claims 13-15), for screening for compounds which alter expression of the claimed polynucleotides (i.e., claim 27), and for assessing toxicity of test compounds (i.e., claim 28), could and should be examined together with the product claims from which they depend, per the Commissioner's Notice in the Official Gazette of March 26, 1996, entitled "Guidance on Treatment of Product and Process Claims in light of *In re Ochiai, In re Brouwer* and 35 U.S.C. § 103(b)" which sets forth the rules, upon allowance of product claims, for rejoinder of process claims covering the same scope of products. Applicants presume these method claims will be rejoined, upon determining allowability of the product claims from which they depend.

It is also submitted that claims 1, 2, and 16, drawn to the polypeptides of the invention, could

be examined along with the polynucleotide claims without undue burden on the Examiner. A search for prior art to determine the novelty of the polynucleotides would substantially overlap with a search of the prior art to determine the novelty of the polypeptides encoded by the polynucleotides.

In addition, Applicants traverse the requirement for election of a sequence as between elements in Markush groups (those elements being, respectively, SEQ ID NO:18-34, which encode polypeptides of SEQ ID NO:1-17). The Examiner's attention is directed to the Patent Office's own requirements for Markush practice, set forth in the 8th edition of the M.P.E.P. (August, 2001) at § 803.02 regarding restriction requirements in Markush-type claims:

> **PRACTICE RE MARKUSH-TYPE CLAIMS**
>
> If the members of the Markush group are **sufficiently few in number or so closely related** that a search and examination of the entire claim can be made without serious burden, the examiner must examine all the members of the Markush group in the claim on the merits, even though they are directed to independent and distinct inventions. In such a case, the examiner will not follow the procedure described below and will not require restriction.
>
> Since the decisions in *In re Weber*, 580 F.2d 455, 198 USPQ 328 (CCPA 1978) and *In re Haas*, 580 F.2d 461, 198 USPQ 334 (CCPA 1978), **it is improper for the Office to refuse to examine that which applicants regard as their invention**, unless the subject matter in a claim lacks unity of invention. *In re Harnish*, 631 F.2d 716, 206 USPQ 300 (CCPA1980); and *Ex parte Hozumi*, 3 USPQ2d 1059 (Bd. Pat. App. & Int. 1984). Broadly, **unity of invention exists where compounds included within a Markush group (1) share a common utility, and (2) share a substantial structural feature disclosed as being essential to that utility**.
>
> This subsection deals with Markush-type generic claims which include a plurality of alternatively usable substances or members. In most cases, a recitation by enumeration is used because there is no appropriate or true generic language. A Markush-type claim can include independent and distinct inventions. This is true where two or more of the members are so unrelated and diverse that a prior art reference anticipating the claim with respect to one of the members would not render the claim obvious under 35 U.S.C. 103 with respect to the other member(s). In applications containing claims of that nature, **the examiner may require a provisional election of a single species** prior to examination on the merits. The provisional election will be given effect in the event that the Markush-type claim should be found not allowable. Following election, the Markush-type claim will be examined fully with respect to the elected species and further to the extent necessary to determine patentability. If the Markush-type claim is not allowable over the prior art, examination will be limited to the Markush-type claim and claims to the elected species, with claims drawn to species patentably

distinct from the elected species held withdrawn from further consideration.

As an example, in the case of an application with a Markush-type claim drawn to the compound C-R, wherein R is a radical selected from the group consisting of A, B, C, D, and E, the examiner may require a provisional election of a single species, CA, CB, CC, CD, or CE. The Markush-type claim would then be examined fully with respect to the elected species and any species considered to be clearly unpatentable over the elected species. If on examination the elected species is found to be anticipated or rendered obvious by prior art, the Markush-type claim and claims to the elected species shall be rejected, and claims to the nonelected species would be held withdrawn from further consideration. As in the prevailing practice, a second action on the rejected claims would be made final.

On the other hand, should no prior art be found that anticipates or renders obvious the elected species, the search of the Markush-type claim will be extended. If prior art is then found that anticipates or renders obvious the Markush-type claim with respect to a nonelected species, the Markush-type claim shall be rejected and claims to the nonelected species held withdrawn from further consideration. The prior art search, however, will not be extended unnecessarily to cover all nonelected species. Should applicant, in response to this rejection of the Markush-type claim, overcome the rejection, as by amending the Markush-type claim to exclude the species anticipated or rendered obvious by the prior art, the amended Markush-type claim will be reexamined. The prior art search will be extended to the extent necessary to determine patentability of the Markush-type claim. In the event prior art is found during the reexamination that anticipates or renders obvious the amended Markush-type claim, the claim will be rejected and the action made final. Amendments submitted after the final rejection further restricting the scope of the claim may be denied entry. [emphasis added]

As can be seen from the above, it is clear that the present Restriction/Election Requirement does not meet the Patent Office's own requirements.

It is improper for the Office to refuse to examine that which applicants regard as their invention, unless the subject matter in a claim lacks unity of invention. All of the claimed polynucleotide sequences encode human membrane-spanning proteins. In addition, the polynucleotides of the instant invention share a common utility in, for example, toxicology studies based on expression profiling.

Therefore, it is respectfully submitted that, upon searching and examining SEQ ID NO:26, which encodes SEQ ID NO:9, and finding no prior art over which SEQ ID NO:26 can be rejected, the Examiner must extend the search of the Markush-type claim to include the non-elected species.

Applicants reserve the right to prosecute non-elected subject matter in subsequent divisional applications.

If the Examiner contemplates other action, or if a telephone conference would expedite allowance of the claims, Applicants invite the Examiner to contact the undersigned at (650) 621-8581.

If the USPTO determines that any additional fees are due, the Commissioner is hereby authorized to charge Deposit Account No. **09-0108.**

Respectfully submitted,

INCYTE GENOMICS, INC.

Date: August 27, 2002.

Terence P. Lo, Ph.D.
Limited Recognition (37 C.F.R. § 10.9(b)) attached
Direct Dial Telephone: (650) 621-8581

3160 Porter Drive
Palo Alto, California 94304
Phone: (650) 855-0555
Fax: (650) 849-8886

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

The paragraph immediately following the title has been amended as follows:

This application is a **CONTINUATION** application of U.S. application Serial No. 09/039,307, filed on March 13, 1998, originally entitled HUMAN MEMBRANE SPANNING PROTEINS, now abandoned, which is hereby expressly incorporated by reference.

IN THE CLAIMS:

Claims 10, 19, 22, and 25 have been canceled, without prejudice or disclaimer.

Claims 1-3, 5, 9, 11, and 12 have been amended as follows:

1. (Once Amended) An isolated polypeptide encoded by a polynucleotide of claim 3 [selected from the group consisting of:

a) a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO:1-17,

b) a naturally occurring polypeptide comprising an amino acid sequence at least 90% identical to an amino acid sequence selected from the group consisting of SEQ ID NO:1-17,

c) a biologically active fragment of a polypeptide having an amino acid sequence selected from the group consisting of SEQ ID NO:1-17, and

d) an immunogenic fragment of a polypeptide having an amino acid sequence selected from the group consisting of SEQ ID NO:1-17].

2. (Once Amended) An isolated polypeptide of claim 1, comprising an amino acid sequence

selected from the group consisting of SEQ ID NO:1-17.

3. (Once Amended) An isolated polynucleotide encoding a polypeptide [of claim 1] selected from the group consisting of:

a) a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO:1-17, and

b) a polypeptide comprising a naturally occurring amino acid sequence at least 90% identical to an amino acid sequence selected from the group consisting of SEQ ID NO:1-17.

5. (Once Amended) An isolated polynucleotide of claim 4, comprising a polynucleotide sequence selected from the group consisting of SEQ ID NO:18-34.

9. (Once Amended) A method [for] of producing a polypeptide encoded by a polynucleotide of claim [1] 3, the method comprising:

a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide [encoding the polypeptide] of claim [1] 3, and

b) recovering the polypeptide so expressed.

11. (Once Amended) An isolated polynucleotide selected from the group consisting of:

a) a polynucleotide comprising a polynucleotide sequence selected from the group consisting of SEQ ID NO:18-34,

b) a [naturally occurring] polynucleotide comprising a naturally occurring polynucleotide sequence at least 90% identical to a polynucleotide sequence selected from the group consisting of SEQ ID NO:18-34,

c) a polynucleotide complementary to the polynucleotide of a),

d) a polynucleotide complementary to the polynucleotide of b), and

e) an RNA equivalent of a)-d).

12. (Once Amended) An isolated polynucleotide comprising at least [60] 1000 contiguous nucleotides of a polynucleotide selected from the group consisting of [claim 11] :

a) a polynucleotide comprising a polynucleotide sequence selected from the group consisting of SEQ ID NO:18-34,

b) a polynucleotide comprising a naturally occurring polynucleotide sequence at least 90% identical to a polynucleotide sequence selected from the group consisting of SEQ ID NO:18-34,

c) a polynucleotide complementary to a polynucleotide of a),

d) a polynucleotide complementary to a polynucleotide of b), and

e) an RNA equivalent of a)-d).

New claims 79-82 have been added as follows:

79. (New) A polynucleotide of claim 3, encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:9.

80. (New) A polynucleotide of claim 11, comprising the polynucleotide sequence of SEQ ID NO:26.

81. (New) A microarray wherein at least one element of the microarray is a polynucleotide of claim 12.

82. (New) A method of generating an expression profile of a sample which contains polynucleotides, the method comprising:

a) labeling the polynucleotides of the sample,

b) contacting the elements of the microarray of claim 81 with the labeled polynucleotides of the sample under conditions suitable for the formation of a hybridization complex, and

c) quantifying the expression of the polynucleotides in the sample.